MANOLO
CLOUD-EDGE EFFICIENT & TRUSTWORTHY AI

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PRESS RELEASE

ADRA forum Workshop "*Efficient and trustworthy AI frameworks: making the best of cloud-edge European data for scalable real-world industry deployments*."

For the second consecutive year, the five sister projects, AI-DAPT, EXTRA BRAIN, MANOLO, PANDORA, and RAIDO, had the opportunity to come together once again by participating in the ADRA Forum event (ADRF25). The projects exchanged insights and presented progress at the workshop entitled *"Efficient & Trustworthy AI Frameworks: Making the Best of Cloud-Edge European Data for Scalable Real-World Industry Deployments."*

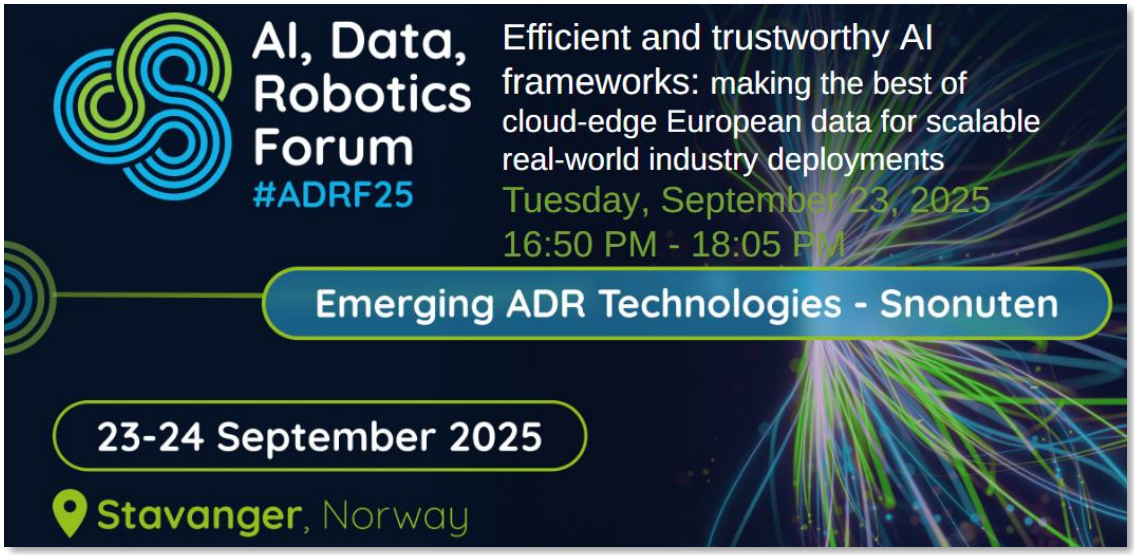

Figure 1: ADRF25 event

General:

AI, Data, and Robotics (ADR) are driving Europe's digital transformation, fostering innovation across industries and society. However, to achieve high-impact value creation, stronger strategies are needed to leverage European data across both cloud and edge environments, while ensuring ADR technologies remain efficient, trustworthy, and interoperable.

The workshop:

The special focus of the workshop was on how to move beyond research into impactful, real-world deployments within the regulatory and strategic context of the **EU's commitment to a sustainable and responsible future.**

In detail, this session aimed to:

- **Identify barriers and needs** for trustworthy AI frameworks.
- Explore **strategies** for maximizing European data **in edge-cloud AI**.

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- Discuss how **partnerships** can support responsible scaling.

The session featured **brief presentations from five projects** focused on developing efficient and trustworthy AI frameworks. Each showcased its **latest advancements**, followed by an engaging panel discussion with experts and industry representatives.

Figure 2. Presenters of the five sister projects

Participants had the opportunity to engage in discussions, ask questions, and contribute to shaping the future of ADR technologies in Europe. Moreover, using "Sli.do", participants were actively involved and interacted with the panelists, answering question polls relevant to the topics presented. This session was particularly relevant for researchers and industry leaders aiming to advance responsible AI innovation.

Moderator: ***Susanne Kührer**, MANOLO Project*

Key findings and project highlights

Speakers and participants identified several critical challenges and needs for the advancement of trustworthy AI in Europe. Among the **main barriers** discussed, participants highlighted the **high complexity of current AI systems**, **unclear ethical frameworks**, and **the lack of expertise** in ethical and legal AI. Additionally, they emphasized the need for clear regulation and standards. Furthermore, during the discussions emerged that the **effective data strategies** to strengthen Europe's position in trustworthy cloud-edge AI include investing in **European cloud infrastructure**, promoting **open and reliable data sources**, and leveraging **foundation models.** Finally, it was outlined that collaboration between research and industry is essential, as by developing and testing new frameworks and technologies through real-world pilots, the EU can facilitate the scaling of trustworthy and responsible AI across sectors.

RAIDO Project: *What is RAIDO's project mission?*

The importance of **energy-efficient data operations** and **transparent governance frameworks** strongly aligns with the Horizon Europe RAIDO project's mission to create a **green, scalable platform for reliable AI and data optimisation**. So, the project will aim to advance RAIDO's dissemination by

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showcasing **green-AI, privacy-respecting,** and interoperable data practices. It will also aim to strengthen alignment with RAIDO's mission to build **sustainable, trustworthy digital infrastructures.**

Panelist: **Vasileios Argyriou**, *RAIDO Scientific Coordinator*

EXTRA-BRAIN Project: *What were the key points discussed during the EXTRA-BRAIN's presentation?*

The **shape and impact of European data strategies** on the widespread adoption of AI solutions by European industry was one of the key points raised during the EXTRA-BRAIN project's presentation and discussed by the audience. Discussions covered the **underlying model's complexity and explainability**, as well as technological approaches and large-scale partnerships, effectively promoting sustainable AI. In the quest for **Green AI**, the EXTRA-BRAIN project focuses on **resource-efficient AI technologies through brain-like computing and neuromorphic implementations.**

Panelist: ***Pawel Herman**, EXTRA-BRAIN Project Coordinator*

MANOLO Project: *How will MANOLO overcome these barriers and contribute to advancing responsible AI innovation?*

The MANOLO project will develop **a set of algorithms and models** designed for both cloud and edge computing to reduce energy and data usage of AI systems. In addition, mechanisms and methods to enhance AI systems' trustworthiness will be developed, ensuring explainability, robustness, security, and regulatory compliance to **build user confidence and meet EU standards**. Finally, dynamic allocation of AI tasks and resources across distributed environments will be achieved, while the MANOLO framework will be **validated in real-world conditions** in the healthcare, manufacturing, and telecommunications sectors.

Panelists:
***Ricardo Simon Carbajo,** MANOLO Project Coordinator*

***Argyro Amidi**, MANOLO Project, Legal Expert*

Figure 3. Workshop: "Efficient and trustworthy AI frameworks: making the best of cloud-edge European data for scalable real-world industry deployments"

AI-DAPT EU Project: *How does AI-DAPT address industry barriers in efficient and Trustworthy AI?*

To address industry barriers, the AI-DAPT EU Project is developing a **couple of legacy, science-based models** with data-driven models in industrial setups and **reusable and adaptive** data/AI pipelines.

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Panelist: ***Theodore Dalamagas****, AI-DAPT Project Coordinator.*

PANDORA Horizon Europe Project: *What is the focus and mission of the PANDORA project?*

The PANDORA project focuses **on advancing AI and data engineering** to drive industrial innovation and enhance the EU economy. It addresses challenges in IoT-generated data processing, aiming to create a single data market for Europe's global competitiveness.

Additionally, PANDORA aims to develop **AI-driven frameworks** for preparing and delivering trustworthy datasets, enhancing AI models' accuracy and sustainability **in AIoT systems**. Its mission includes increasing autonomy, trustworthiness, and energy efficiency in managing IoT datasets for smarter and more responsive devices **in smart space ecosystems**.

Panelist**: *Stella Markopoulou,*** *from the PANDORA project.*

QUOTES:

Argyro Amidi, MANOLO Legal expert stated*: "From the point of view of a legal expert, explainability remains a major need to achieve the trustworthiness desired for AI adoption in real-life use cases, mainly in the public sector, where accountability is a mandatory requirement of the execution of public services*."

Ricardo Simon Carbajo, MANOLO Project Coordinator, said: *"It is always a pleasure to engage in conversations with the other sister projects aligned with the topic of trustworthy and efficient AI. While we have the same goal, each project is contributing from a different angle, which, surprisingly, if we were to merge the outcome of all of them, will be quite complementary. I was delighted by people's engagement in our discussions. We at the MANOLO project are moving forward to address trustworthy and sustainable AI in the cloud-edge continuum by creating a practical toolset and framework for AI practitioners in Europe."*

Conclusion:

The workshop successfully fostered collaboration among leading European AI projects, advancing the shared vision of efficient, trustworthy, and sustainable AI for Europe's digital future. By bringing together experts from research, industry, and policy, the session marked another important step toward building a responsible, human-centric, and globally competitive AI ecosystem in Europe.

The MANOLO consortium, under the leadership of **Ireland's National Centre for Applied AI, CeADAR,** is composed of 19 partners across 8 European countries: Ireland, Belgium, Finland, France, Germany, Greece, Romania, and Spain. The consortium members include: NUIDUCD-CeADAR, UPC, ATOS IT, EVIDEN RO, TUBS, NCSR "D", FDI, INRIA, Fraunhofer IIS, UPSaclay, ARCADA, KU Leuven, LAUREA, PAL ROBOTICS, BIT&BRAIN, ARX.NET, Q-PLAN, EIT Digital Spain, and EIT DIGITAL.

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